

Abstract of the Disclosure

In order to maximize the production of propylene when the external supply of ethylene is limited, the C₄ cut from a hydrocarbon cracking process is first subjected to autometathesis prior to any isobutylene removal and without any ethylene addition. This favors the reactions which produce propylene and pentenes. The ethylene and propylene produced are then removed leaving a stream of the C₄'s and heavier components. The C₅ and heavier components are then removed leaving a mixture of 1-butene, 2-butene, isobutylene, and iso- and normal butanes. The isobutylene is next removed preferably by a catalytic distillation hydroisomerization de-isobutyleneizer. The isobutylene-free C₄ stream is then mixed with the product ethylene removed from the autometathesis product together with any fresh external ethylene needed and subjected to conventional metathesis producing additional propylene.

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